

ABSTRACT OF THE INVENTION

Alpha-haloketones are useful alkylating agents for coupling to sulphhydryl-containing biomolecules. However, they react spontaneously with water, alkali and organic bases and therefore cannot be stored for extended periods of time in aqueous solutions, particularly in the presence of proteins at physiological pH. The present invention provides novel solutions to these problems, however, as novel compounds and compositions comprising protected haloketones are disclosed herein. Methods of preparing and using protected haloketones which are useful in a variety of applications — e.g., in assays and conjugation reactions — are also disclosed herein.